

What is claimed is:

1. A circuit board having a circuit board thickness, the circuit board comprising:
a core layer including one or more fibers; and
a surface layer having a surface layer thickness that is between about 10% and about 30% of the circuit board thickness, the surface layer being free of fibers.
2. The circuit board of claim 1, wherein the core layer is fabricated from a resin in which the one or more fibers are embedded.
3. The circuit board of claim 1, wherein at least one of the one or more fibers comprises a glass fiber.
4. A circuit board having a circuit board thickness, the circuit board comprising:
a core layer including a number of fibers; and
a surface resin layer having a surface layer thickness that is between about 10% and about 30% of the circuit board thickness.
5. The circuit board of claim 4, wherein the core layer is a polymeric composite material.
6. The circuit board of claim 4, wherein the core layer has a thickness of between about .006 inches and .012 inches.
7. A circuit board having a circuit board thickness, the circuit board comprising:
a first layer having a first layer thickness that is between about 10% to 15% of the circuit board thickness, the first layer being free of fibers;
a second layer having a second layer thickness that is between about 10% to 15% of the circuit board thickness; and

a core layer located between the first layer and the second layer, the core layer including a number of fibers.

8. The circuit board of claim 7, wherein the core layer has greater mechanical strength than the first layer.

9. The circuit board of claim 7, wherein the core layer has greater mechanical strength than the second layer.

10. A circuit board having a circuit board thickness, the circuit board comprising:
a first resin layer having a first layer thickness that is between about 10% and about 15% of the circuit board thickness;

a second resin layer having a second layer thickness that is between about 10% and about 15% of the circuit board thickness; and

a core layer located between the first resin layer and the second resin layer, the core layer including a number of fibers.

11. The circuit board of claim 10, wherein the first resin layer is free of fibers.

12. The circuit board of claim 11, wherein the second resin layer is free of fibers.

13. A circuit board assembly comprising:

a first circuit board;

a second circuit board coupled to the first circuit board, the second circuit board having a thickness and including a number of fibers having a fiber thickness of between about .001 inches and about .002 inches, the second circuit board having a surface located at a distance of between about 10 % to 20% of the thickness away from the number of fibers; and

a die coupled to the second circuit board.

14. The circuit board assembly of claim 13, wherein the die includes a dynamic random access memory (DRAM).

15. The circuit board assembly of claim 13, wherein the die includes a processor.

16. A circuit board assembly comprising:

a first circuit board;

a second circuit board coupled to the first circuit board, the second circuit board having a thickness and including a number of fibers having a fiber thickness of between about .001 inches and about .002 inches, the second circuit board having a surface located at a distance of between about 10 % and about 30% of the thickness away from the number of fibers; and

a die coupled to the second circuit board.

17. The circuit board assembly of claim 16, wherein the die includes an amplifier.

18. The circuit board assembly of claim 16, wherein the die includes an application specific integrated circuit (ASIC).

19. A circuit board assembly comprising:

a first circuit board;

a second circuit board coupled to the first circuit board, the second circuit board comprising:

a core layer including a number of fibers; and

a surface layer having a surface layer thickness that is between about 10% and about 30% of the circuit board thickness, the surface layer being free of fibers; and

a die coupled to the second circuit board.

20. The circuit board assembly of claim 19, wherein the second circuit board has a thickness and includes a number of fibers having a fiber thickness of between about .001

inches and about .002 inches, the second circuit board has a surface located at a distance of between about 10% and 30% of the thickness away from the number of fibers.

21. A circuit board assembly comprising:

a first circuit board;

a second circuit board coupled to the first circuit board, the second circuit board having a thickness and including a number of fibers having a fiber thickness of between about .001 inches and about .002 inches, the second circuit board having a first surface located at a first distance of between about 10 % to 15% of the thickness away from the number of fibers and a second surface located at a second distance of between about 10% to 15% of the thickness away from the number of fibers; and

a die coupled to the second circuit board.

22. The circuit board assembly of claim 21, wherein the first circuit board is a computer system circuit board.

23. The circuit board assembly of claim 21, wherein the second circuit board is a memory circuit board.

24. A circuit board assembly comprising:

a first circuit board;

a second circuit board coupled to the first circuit board, the second circuit board having a thickness, the second circuit board having a first surface located at a first distance of between about 10 % and about 15% of the thickness away from a number of fibers and a second surface located at a second distance of between about 10% and about 15% of the thickness away from the number of fibers; and

a die coupled to the second circuit board.

25. The circuit board assembly of claim 24, wherein the die is coupled to the second circuit board by an adhesive.

26. A system comprising:
a processor;
a die having a number of memory circuits, at least one of the number of memory circuits being coupled to the processor; and
a circuit board coupled to the die, the circuit board having a surface and a thickness, and the circuit board including a number of embedded fibers such that the number of embedded fibers are located at a distance of between about 10% to 30% from the surface of the circuit board.
27. The system of claim 26, wherein the processor is a microprocessor.
28. The system of claim 26, wherein the number of memory circuits are static random access memory (SRAM) circuits.
29. A system comprising:
a processor;
a die having a number of memory circuits, at least one of the number of memory circuits being coupled to the processor; and
a circuit board coupled to the die, the circuit board having a first surface, a second surface, and a thickness, and the circuit board including a number of embedded fibers such that the number of embedded fibers are located at a distance of between about 10% and about 15% from the first surface and at a distance of between about 10% and about 15% from the second surface.
30. The system of claim 29, wherein the processor is a reduced instruction set computer (RISC).
31. The system of claim 29, wherein the number of embedded fibers is one.

32. A system comprising:
a processor;
a die having a number of memory circuits, at least one of the number of memory circuits being coupled to the processor; and
a circuit board coupled to the die, the circuit board having a first surface, a second surface, and a thickness, and the circuit board including a number of embedded fibers, each of the number of embedded fibers having a thickness of between about .010 inches and .020 inches, the number of embedded fibers are located at a distance of between about 10% to 15% from the first surface and at a distance of between about 10% to 15% from the second surface.
33. The system of claim 32, wherein the processor is a digital signal processor (DSP).
34. The system of claim 32, wherein the circuit board is thermally coupled to the die.
35. A method of fabricating a circuit board having a circuit board thickness, the method comprising:
forming a core layer including a number of fibers; and
forming a surface layer on the core layer, the surface layer having a surface layer thickness that is between about 10% and about 30% of the circuit board thickness, the surface layer being free of fibers.
36. The method of claim 35, wherein forming a core layer including a number of fibers comprises:
embedding the number of fibers in a resin.
37. The method of claim 35, wherein forming a core layer including a number of fibers comprises:
embedding the number of fibers in a polymeric composite material.

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38. A method of fabricating a circuit board having a circuit board thickness, the method comprising:
- forming a core layer including a number of fibers; and
 - forming a surface resin layer on the core layer, the surface layer having a surface layer thickness that is between about 10% to 30% of the circuit board thickness.
39. The method of claim 38, further comprising:
- forming a number of slots in the circuit board.
40. The method of claim 38, further comprising:
- mounting a die using an adhesive over each of the number of slots.
41. A method of fabricating a circuit board having a circuit board thickness comprising:
- forming a core layer including a number of fibers;
 - forming a first layer on the core layer, the first layer having a thickness between about 10% and about 15% of the circuit board thickness and the first layer being free of fibers; and
 - forming a second layer on the core layer, the second having a thickness that is between about 10% and about 15% of the circuit board thickness.
42. A method of fabricating a circuit board having a circuit board thickness comprising:
- forming a core layer including a number of fibers;
 - forming a first layer on a first side of the core layer, the first layer having a thickness between about 10% and about 15% of the circuit board thickness and the first layer being free of fibers; and
 - forming a second layer on a second side of the core layer, the second having a thickness that is between about 10% and about 15% of the circuit board thickness.

43. A method of fabricating a circuit board having a circuit board thickness comprising:

forming a core layer including a number of fibers;

forming a first resin layer on the core layer, the first resin layer having a thickness between about 10% and about 15% of the circuit board thickness; and

forming a second resin layer on the core layer, the second resin layer having a thickness that is between about 10% and about 15% of the circuit board thickness.

44. The method of claim 43, wherein forming the core layer includes embedding the fibers in a resin layer.